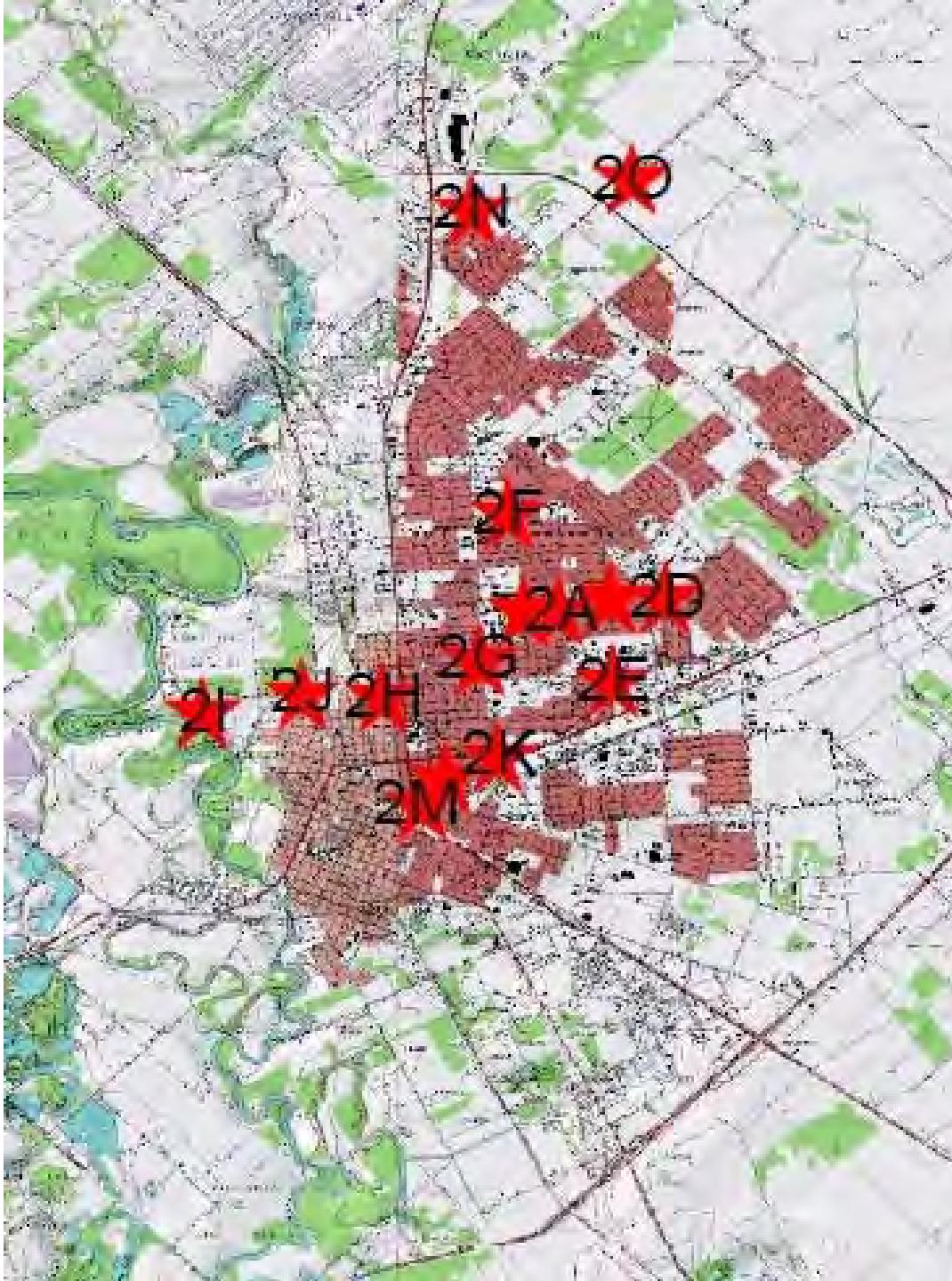


Summary of a Preliminary Drawdown Analysis
for the
City of Victoria Ground Water Supply System

Slide 2





THE LAYNE TEXAS COMPANY, LTD.
 HOUSTON - DALLAS
MATERIAL SETTING

REPORT NO. 3339
 S.O. 2345-53
 PAGE 1 OF 1
 FILE NO. 1847
 DATE 9/18/53

CUSTOMER LOCATION		WELL DATA	
FOR CITY OF VICTORIA		NAME WELL	SAME WELL NO. 18
LOCATION WELL VICTORIA		ELeVEL	DATUM
SURVEY FIELD		TYPE WELL GRAVEL-WALL	
COUNTY VICTORIA	STATE TEXAS	SURFACE CASING CEMENTED YES NO SACKS 765	
OTHER LAND MARKS		SIZE HOLE UNDERREAMED 30" DEPTH 435-1017'	
		GRAVEL TYPE FILTER NO. CU. YDS. 150	
		TYPE SCREEN S-S. W.W. GAGE 1050	
		DRILLER GUYZMANN RIG NO. 2-5 SPEC.	
		OTHER	

DEPTH	LENGTH	SIZE, KIND, WEIGHT MATERIAL	SKETCH
0 / 1.01'		18"OD CASING EXTENDS 1' ABOVE SURFACE	
0		SURFACE	
360.44'	1	TOP OF 10-3/4"OD LAPS 66.56' INTO	
475.00'	136.00'	18" O.D.	
472.49'	1	18" O.D. SURFACE CASING	
469.49'	74.05'	10-3/4" O.D. BLANK PIPE	
466.49'	22.00'	10-3/4"OD S.S. W.W. SCREEN .050 BA.	
463.64'	19.15'	10-3/4" O.D. BLANK PIPE	
509.65'	26.01'	10-3/4" O.D. SCREEN	
516.87'	69.22'	10-3/4" O.D. BLANK PIPE	
589.72'	10.85'	10-3/4" O.D. SCREEN	
613.95'	24.23'	10-3/4" O.D. BLANK PIPE	
629.85'	15.90'	10-3/4" O.D. SCREEN	
639.02'	9.17'	10-3/4" O.D. BLANK PIPE	
669.92'	30.90'	10-3/4" O.D. SCREEN	
687.20'	17.28'	10-3/4" O.D. BLANK PIPE	
709.95'	22.75'	10-3/4" O.D. SCREEN	
722.63'	12.68'	10-3/4" O.D. BLANK PIPE	
745.00'	22.37'	10-3/4" O.D. SCREEN	
779.12'	34.12'	10-3/4" O.D. BLANK PIPE	
810.32'	31.20'	10-3/4" O.D. SCREEN	
874.55'	61.23'	10-3/4" O.D. BLANK PIPE	
884.55'	10.00'	10-3/4" O.D. SCREEN	
933.55'	49.00'	10-3/4" O.D. BLANK PIPE	
955.55'	22.00'	10-3/4" O.D. SCREEN	
974.83'	19.28'	10-3/4" O.D. BLANK PIPE	
1000.00'	25.17'	10-3/4" O.D. SCREEN	
1015.00'	15.00'	10-3/4" O.D. BLANK PIPE	
1017.00'	2.00'	10-3/4" O.D. SET NIPPLE, B.P. VALVE & W.W. PLUG	

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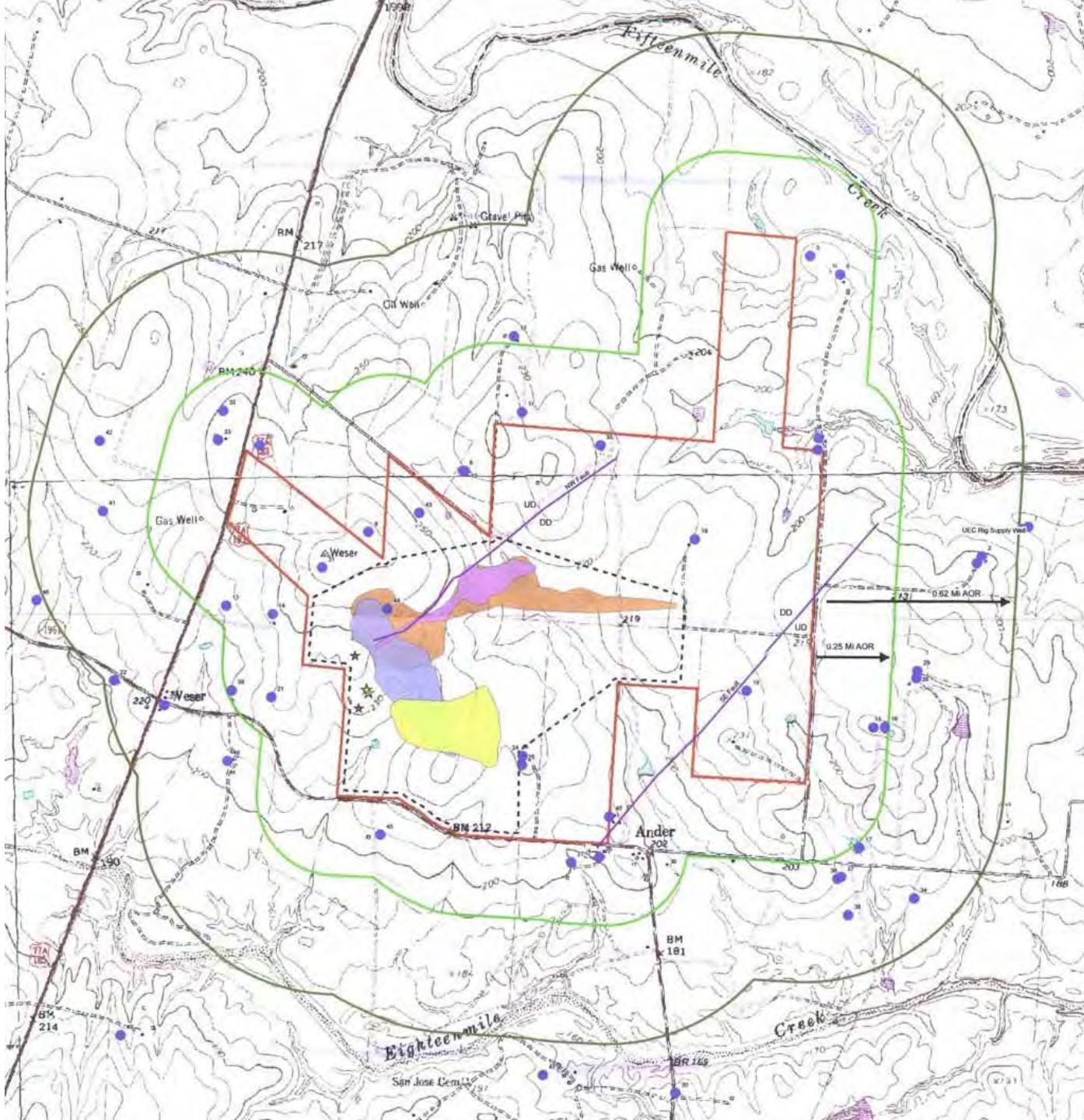
12/14/2000	1.303	0	0	1.174	0.331	1.268	0.356	0	0	1.445	0.741	0	1.445	0.547	0.519
12/15/2000	1.138	1.136	0	0.987	0.32	1.05	0.329	0	0	1.112	0.6	0	0.516	0.465	0.463
12/16/2000	0	1.002	0	0.957	0.532	1.027	0.256	0	0	1.062	0.547	0	1.053	0.532	0.545
12/17/2000	0	1.551	0	1.107	0.425	1	0.202	0	0	1.217	0.552	0	1.037	0.363	0.316
12/18/2000	0	0.986	0	1.001	0.632	1.081	0.502	0	0	1.185	0.46	0	0.866	0.51	0.524
12/19/2000	0	1.514	0	1.237	0.248	1.361	0.524	0	0	1.52	0.399	0	0.781	0.504	0.505
12/20/2000	0	1.389	0	1.165	0.658	1.287	0.18	0	0	1.274	0.348	0	0.652	0.371	0.344
12/21/2000	0	1.079	0	1.042	0.283	0.952	0.34	0	0	1.785	0.407	0	0.961	0.62	0.638
12/22/2000	0	1.436	0	1.192	0.216	1.291	0.518	0	0	1.365	0.45	0	0.86	0.473	0.46
12/23/2000	0	1.331	0	1.116	0.403	1.212	0.264	0	0	1.295	0.382	0	0.727	0.579	0.548
12/24/2000	0	1.556	0	1.275	0.34	1.362	0.345	0	0	1.442	0.398	0	0.758	0.458	0.433
12/25/2000	0	1.258	0	1.051	0.412	1.147	0.281	0	0	1.358	0.387	0	0.738	0.414	0.406
12/26/2000	0	1.407	0	1.163	0.17	1.269	0.517	0	0	1.29	0.395	0	0.732	0.363	0.356
12/27/2000	0	1.212	0	1.137	0.378	1.089	0.329	0	0	1.383	0.423	0	0.803	0.558	0.563
12/28/2000	0	1.284	0	1.045	0.452	1.132	0.283	0	0	1.149	0.491	0	0.934	0.418	0.391
12/29/2000	0	1.35	0	1.107	0.393	1.184	0.265	0	0	1.154	0.425	0	0.783	0.367	0.381
12/30/2000	0	1.197	0	0.986	0.322	1.033	0.588	0	0	1.101	0.469	0	0.912	0.378	0.373
12/31/2000	0	1.322	0	1.087	0.434	1.174	0.248	0	0	1.277	0.439	0	0.83	0.444	0.437
Total MG	268.639	377.464	437.915	93.021	216.369	202.960	208.220	106.636	411.627	458.903	117.200	202.580	226.530	262.682	253.897

Yr 2000

Well #	14	15	16	17	18	20	21	23	25	26	12	18	22	24	27
Max MGD	2,120	3,136	3,124	1,406	2,709	2,513	2,74	2,057	3,272	2,841	2	1.7	1,494	1,847	1,796
Acre/Ft	625.04	1,158.36	1,343.91	285.47	664.01	622.86	639.00	333.40	1,263.85	1,408.32	359.87	621.69	605.20	776.37	779.18

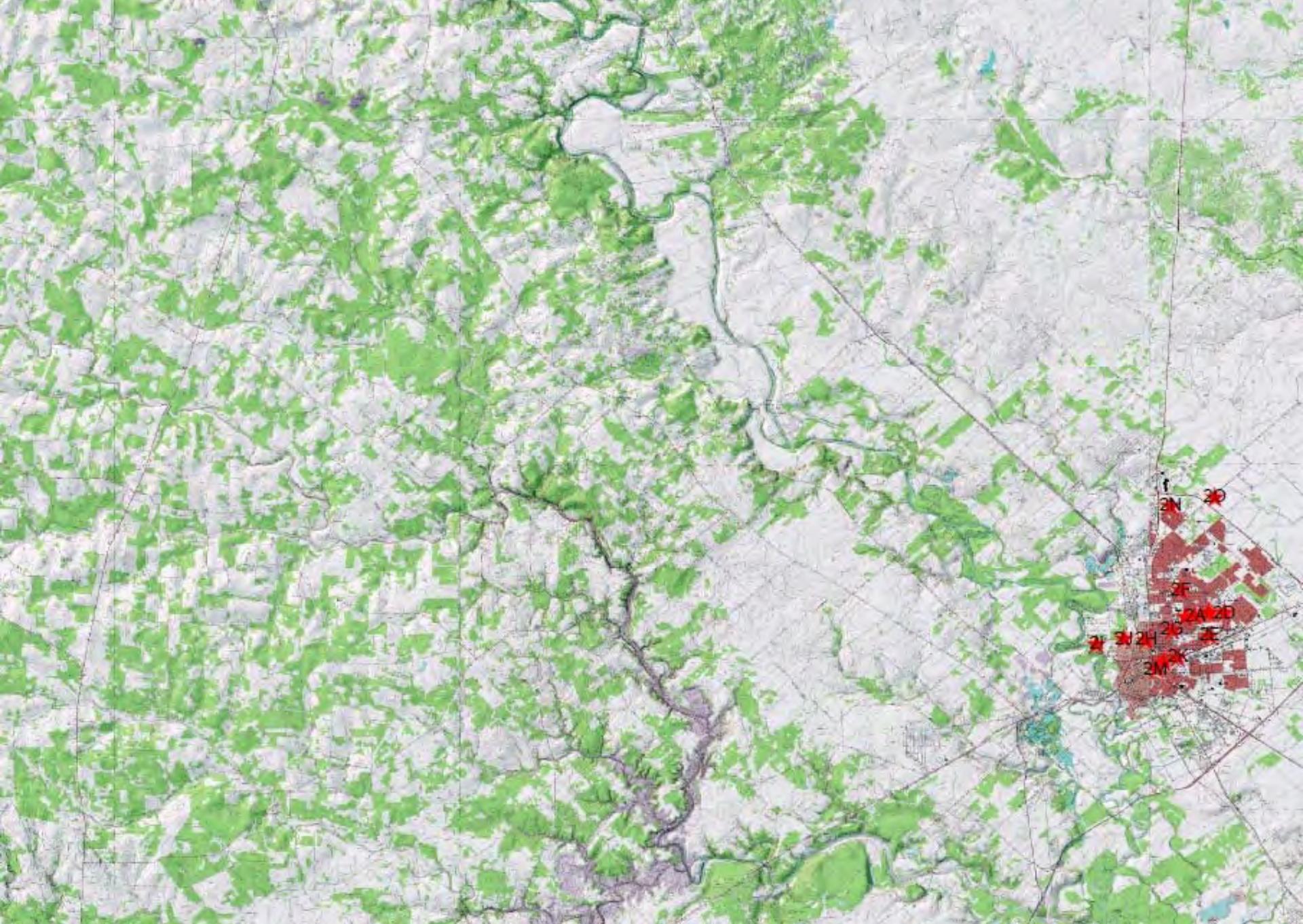
Total Acre/Ft 11,776.34

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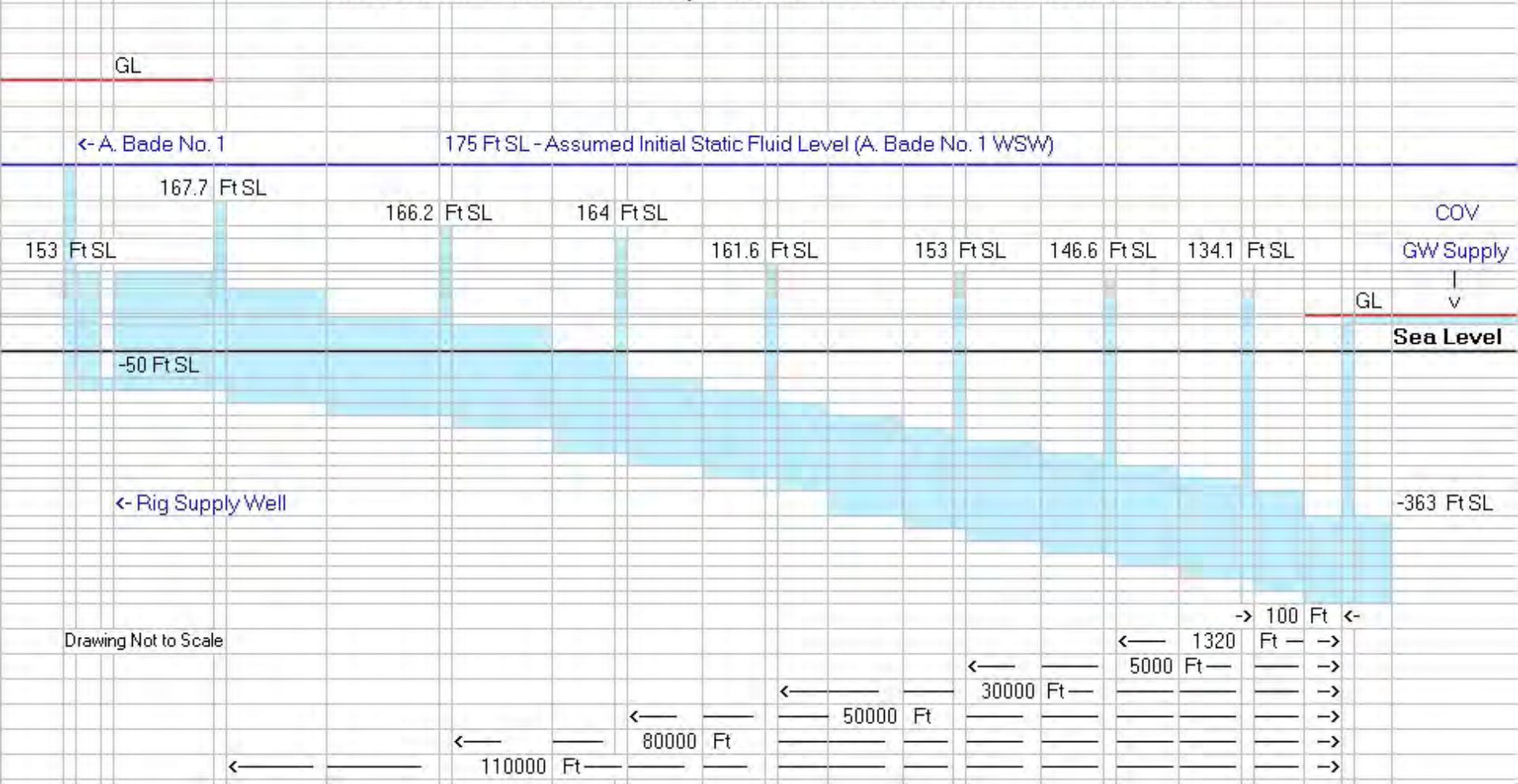
Well Name	Map ID	Ground Level (ft) Above SL	Total Depth (ft)	Total Depth (ft) Above SL	Fluid Level (ft) From Surface	Fluid Level (ft) Above SL
J. Jacob 1	1	203	80	123	53.87	149.13
J. Jacob - ORW*	7	170	?		220.00	-50.00
C. Duderstadt 1	9	238	?		49.93	188.07
O. Bluntzer 1	15	230	128	102	80.00	150.00
K. Gray 1	17	185	?		36.04	148.96
T. Anklam 1	20	243	300	-57	86.60	156.40
A. Bade 1	22	204	86	118	31.00	173.00
A. Bade 2	23	218	?		49.05	168.95
M. Braquet 1	24	231	?		67.74	163.26
C. Tolbert 1	28	210	?		58.31	151.69
P. Breeden 3	38	178	460	-282	43.32	134.68
L. Schrade 1	40	212	?		68.57	143.43
H. Becker 1	47	177	?		21.18	155.82

* Old Rig Well



Preliminary Aquifer Drawdown Analysis for City of Victoria (COV) Ground Water Supply System

Model Results For 50 Years of Operation at 1000 Ac-Ft/Yr Water Production Rate



Summary of Preliminary Aquifer Drawdown Analysis for the City of Victoria Ground Water Supply Wells

Basic Input Data									
City's Population:	65,000	Datum:	Sea Level	Porosity (%)	35.0				
Number of Water Well	15	Initial Reservoir Press. PSI		Permeability (md)		Compressibility (1/PSI)			
GW Production. Rate	1,000 Ac-Ft/Yr	Viscosity (cp)	0.75	Thickness (Ft)	220				
	21,276 Bbl/Day	Form. Vol. Fctr.		1.0					

Model Results - Estimated Pressure and Hydrostatic Head Changes

Years of Operati on	Drwdwn @ 1.0 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 1.0 Ft From No. 14 Well	Drwdwn @ 10 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 10 Ft From No. 14 Well	Drwdwn @ 100 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 100 Ft From No. 14 Well	Drwdwn @ 1000 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 1000 Ft From No. 14 Well	Drwdwn @ 1320 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 1320 Ft From No. 14 Well	
1	-24.3	-53.4		-19.3	-42.5	-14.3	-31.5	-9.3	-20.5	-8.7	-19.1
10	-26.9	-59.2		-21.8	-47.9	-16.8	-37.0	-11.8	-26.0	-11.2	-24.6
20	-27.6	-60.7		-22.6	-49.7	-17.6	-38.7	-12.5	-27.5	-11.9	-26.2
30	-28.1	-61.8		-23.0	-50.6	-18.0	-39.6	-13.0	-28.6	-12.4	-27.3
50	-28.6	-62.9		-23.6	-51.9	-18.6	-40.9	-13.5	-29.7	-12.9	-28.4

Years of Operati on	Drwdwn @ 5000 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 5000 Ft From No. 14 Well	Drwdwn @ 30000 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 30000 Ft From No. 14 Well	Drwdwn @ 50000 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 50000 Ft From No. 14 Well	Drwdwn @ 80000 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 80000 Ft From No. 14 Well	Drwdwn @ 110000 Ft From No. 14 Well PSI	Hydr. Head (Ft) Change @ 110000 Ft From No. 14 Well	
1	-5.8	-12.8		-1.8	-4.0	-0.7	-1.5	0.0	0.0	0.0	0.0
10	-8.3	-18.3		-4.4	-9.7	-3.2	-7.0	-2.2	-4.8	-1.5	-3.3
20	-9.0	-19.8		-5.1	-11.2	-4.0	-8.8	-3.0	-6.6	-2.3	-5.1
30	-9.5	-20.9		-5.6	-12.3	-4.4	-9.7	-3.4	-7.5	-2.7	-5.9
50	-10.0	-22.0		-6.1	-13.4	-5.0	-11.0	-4.0	-8.8	-3.3	-7.3

